

WILLIAMS

Serial No. 09/171,921

Page 13, line 27, after "transmit", insert --a--.

Page 15, line 26, after "looking", insert --at--.

Page 16, line 27, change "and" to --an--;

line 28, after "and", insert --an--;

line 29, after "port", insert --they--; and

line 33, change "includes" to --include--.

IN THE CLAIMS

Amend claims 1-31 to obviate outstanding formality-based objections/rejections, to otherwise place these claims in more traditional US format and to place provisionally allowed claims 12-15, 30 and 31 in self-contained allowed format:

Sub
C1
B1
Cmt

1. (Amended) ~~A portable computer comprising:~~
movement detection means responsive to movement of the computer to produce
an electrical output signal representative of such movement, and
processing means responsive to the output of said [position] movement detection
means to determine detected movement data defining a user's intention,
the processing means using said data to provide a mode response selected from a
~~multiplicity of stored possible modes.~~

2. (Amended) A portable computer as[claimed] in claim 1, in which the movement detection means comprises at least one acceleration detection means responsive to movement of the computer to produce the output electrical signal.

3. (Amended) A portable computer as [claimed] in [claimed] claim 2, in which a plurality of acceleration detection means each producing a respective electrical output signal representative of movement component in respective directions are provided.

4. (Amended) A portable computer as [claimed] in claim 3, in which the detectors are mounted to detect x and y movement components at a 90° angle to each other.

5. (Twice Amended) ~~A portable computer as [claimed] in claim 1, in which the processing means includes a data input mode and detected movement data is used to generate alphanumeric or graphical data.~~

6. ~~(Amended) A portable computer as [claimed] in claim 5, in which the generated alphanumeric or graphical data is stored in a data store.~~

7. (Amended) A portable computer as [claimed] in claim 5, in which the alphanumeric or graphical data is output by transmitting means to receiving means connected to another processing device.

8. (Twice Amended) A portable computer as[claimed] in claim 1, in which the processing means includes a screen output mode in which detected movement data is used to modify output to display means of the computer.

Sub
C4

9. ~~(Amended) A portable computer as [claimed] in claim 8, [whereby]~~
wherein detected movement data is used to effect scrolling of displayed information such that portions of data defining alphanumeric or graphic information outside a currently displayed screen may be selected by the user.

10. (Amended) A portable computer as [claimed] in claim 9, in which a relative lateral tilting movement causes the display of information stored as to one or ~~other side of [the] currently displayed information.~~

B1
Cmt
Sub
C5

11. ~~(Twice Amended) A portable computer as [claimed] in claim 9, in which~~
relative rolling movement causes the display of information stored as above or below ~~[the] currently displayed information.~~

12. (Twice Amended) A portable computer [as claimed in claim 8, in which]
comprising:

movement detection means responsive to movement of the computer to produce
an electrical output signal representative of such movement,

processing means responsive to the output of said movement detection means to
determine detected movement data defining a user's intention,

the processing means using said data to provide a mode response selected from a multiplicity of stored possible modes; and

wherein the processing means is responsive to detected movement data to determine a most likely orientation of the computer display means, the processing means causing the displayed information to be oriented accordingly.

13. (Amended) A portable computer as [claimed] in claim 12, in which a plurality of switch means responsive to user action is included adjacent to the display means, the respective function of each of the switch means being oriented to match the orientation of displayed information.

B1 Sub
Cmt E1
14. (Twice Amended) A portable computer as [claimed] in claim 12 ~~further~~ comprising a touch sensitive static potentiometer strip responsive to movement of a users finger to simulate movement of a potentiometer, the orientation of said potentiometer reflecting the orientation of the displayed information

15. (Twice Amended) A portable computer [as claimed in claim 8 including] comprising:

movement detection means responsive to movement of the computer to produce an electrical output signal representative of such movement,

processing means responsive to the output of said movement detection means to determine detected movement data defining a user's intention,

the processing means using said data to provide a mode response selected from a multiplicity of stored possible modes; and

wherein proximity detection means which provides signals indicative of the proximity of the computer display screen to a user's view, the processing means being further responsive to changes in relative proximity to increase or decrease the density of displayed information.

16. (Twice Amended) A portable computer as [claimed] in claim 1, in which the processing means stores data defining an authorised user's password, the processing means being locked in a secure mode until detected movement data corresponding to the security data is received.

17. (Twice Amended) A portable computer as [claimed] in claim 1, further comprising a sound input device, the processing means being responsive to voice input signals from a user to derive alphanumeric data.

18. (Twice Amended) A portable computer as [claimed] in claim 1, including a sound output device, the processing means being arranged to provide output of speech or other sound signals derived from stored data.

19. (Amended) A portable computer as [claimed] in claim 17, further including a sound output device in combination with a radio transceiver whereby cellular or radio telephony networks may be used.

20. (Twice Amended) A portable computer as [claimed] in claim 1, including radio transmission or infrared transmission means, the processing means being responsive to detected movement data to output to the transmission means signals representative of the detected movement.

21. (Twice Amended) A portable computer as [claimed] in claim 1, including radio transmission or infrared transmission means, the processing means being responsive to detected movement data to output to the transmission means signals representative of alphanumeric characters.

B1
Cmt
22. (Twice Amended) A portable computer as [claimed] in claim 1, including radio transceiver means, the processing means being responsive to detected movement data which identifies another device to cause the transmission of coded signals including a message for display.

23. (Amended) A portable computer as [claimed] in [claimed in] claim 22 in which the processing means is responsive to received encoded radio signals to activate a paging alert.

24. (Amended) A portable computer as [claimed] in claim 23, in which the page alert comprises a tone.

25. (Amended) A portable computer as [claimed] in claim 23, in which the paging alert comprises [a] an operation of a vibrating means.

26. (Twice Amended) A portable computer as [claimed] in claim 22, in which the processing means causes the display of a message derived from the information received.

27. (Twice Amended) A portable computer as [claimed] in claim 1 housed in a casing shaped to facilitate a user holding the computer as a writing stylus.

B/
cont 28. (Amended) A portable computer as [claimed] in claim 27, in which the casing comprises a radiused triangular cross-section along a substantial portion of its length.

29. (Amended) A portable computer as [claimed] in claim 28, in which the casing includes a flattened section incorporating a display screen.

Sub
E2 30. ~~(Amended) A portable computer [as claimed in claim 29, in which]~~
said portable computer being housed in a casing shaped to facilitate a user holding
the computer as a writing stylus;
said casing including a radiused triangular cross-section along a substantial portion
of its length and a flattened section incorporating a display screen; and

WILLIAMS

Serial No. 09/171,921

*B1
cmt*
wherein the casing includes angular shaping between a forward holding area adapted to rest in the user's fingers and rearward flattened area holding a display screen the shaping being such as to provide a natural viewing angle of the incorporated display screen while the casing is held as a writing stylus.

31. (Amended) A portable computer as [claimed] in claim 30, in which the shaping causes the rearward screen area to be supported by the dorsal areas of a user's hand.

Please add new claims 32-76:

*B2
cmt*
--32. A portable computer comprising:
a housing incorporating a visible display screen,
the housing being adapted to be held in a user's hand and enclosing a movement detector,
said movement detector being responsive to movement of the housing to produce an electrical output signal representative of said movement,
a data processor responsive to the output of said movement detector to determine detected movement data defining a user input; and
the processor using the detected movement data to modify information displayed on the display screen by selecting a mode response from a multiplicity of stored possible modes.

33. A portable computer as in claim 32 in which the movement detector comprises at least one acceleration detector responsive to movement of the computer to produce the electrical output signal.

34. A portable computer as in claim 33 comprising a plurality of acceleration detectors which each produce a respective electrical output signal representative of a movement component in a respectively corresponding direction.

35. A portable computer as in claim 34, in which the acceleration detectors are mounted to detect x and y movement components at a 90° angle to each other.

B2
cont
36. A portable computer as in claim 32 in which the data processor includes a data input mode and detected movement data is used to selectively generate alphanumeric or graphical data.

37. A portable computer as in claim 36 in which the selectively generated alphanumeric or graphical data is stored in a data store.

38. A portable computer as in claim 36 in which the selected alphanumeric or graphical data is output by a transmitter to a receiver connected to another data processing device.

39. A portable computer as in claim 32 in which the processor includes a screen output mode in which detected movement data is used to modify output to the display of the computer.

40. A portable computer as in claim 39 wherein detected movement data is used to effect scrolling of displayed information such that portions of data defining alphanumeric or graphic information outside a currently displayed screen may be selected by the user.

B2
CMT
41. A portable computer as in claim 40 in which a relative lateral tilting movement causes the selective display of information stored as to one of an other side of currently displayed information.

42. A portable computer as in claim 40 in which relative rolling movement causes the display of information stored as above or below currently displayed information.

43. A portable computer as in claim 39 wherein the processor responds to detected movement data to determine a most likely orientation of the computer display, the processor causing the displayed information to be oriented accordingly on the display.

44. A portable computer as in claim 43 in which a plurality of switches located adjacent to the display respond to user action and correspond to respective functions oriented to match the orientation of displayed information.

45. A portable computer as in claim 43 further comprising a touch sensitive static strip responsive to movement of a user's finger to change the orientation of displayed information.

46. A portable computer as in claim 39 further comprising:

B2
CMT
a proximity detector connected to provide signals indicative of the proximity of the computer display screen to a user's view, the processor being further responsive to changes in such detected relative proximity to increase or decrease the density of displayed information.

47. A portable computer as in claim 32 in which the processor stores data defining an authorized user's password, the processor being locked in a secure mode until detected movement data corresponding to the security data is received.

48. A portable computer as in claim 32 further comprising a sound input sensor, the processor being thereby responsive to voice input signals from a user to derive alphanumeric data.

49. A portable computer as in claim 32 including a sound output transducer, the processor thereby providing output of speech or other sound signals derived from stored data.

50. A portable computer as in claim 48 further including a sound output transducer in combination with a radio transceiver whereby cellular or radio telephony networks are accessible.

51. A portable computer as in claim 32 including a radio or infrared transmitter, the processor being responsive to detected movement data to output to the transmitter signals representative of the detected movement.

B2
CMT

52. A portable computer as in claim 32 including a radio or infrared transmitter, the processor being responsive to detected movement data to output to the transmitter signals representative of alphanumeric characters.

53. A portable computer as in claim 32 including a radio transceiver, the processor being responsive to detected movement data which identifies another device to cause the transmission visa the transceiver of coded signals including a message for display.

54. A portable computer as in claim 53 in which the processor is responsive to received encoded radio signals to activate a paging alert.

55. A portable computer as in claim 54 in which the paging alert comprises a tone.

56. A portable computer as in claim 54 in which the paging alert comprises [a] an operation of a vibrating means.

57. A portable computer as in claim 53 in which the processor causes the display of a message derived from the information received.

58. A portable computer as in claim 32 housed in a casing shaped to facilitate a user holding the computer as a writing stylus.

59. A portable computer as in claim 58 in which the casing comprises a radiused triangular cross-section along a substantial portion of its length.

60. A portable computer as in claim 59 in which the casing includes a flattened section incorporating a display screen.

61. A portable computer as in claim 60 wherein the casing includes angular shaping between a forward holding area adapted to rest in the user's fingers and rearward flattened area holding a display screen the shaping being such as to provide a natural viewing angle of the incorporated display screen while the casing is held as a writing stylus.

62. A portable computer as in claim 61 in which the shaping causes the rearward screen area to be supported by the dorsal areas of a user's hand.

63. A method of operating a portable computer having an internal data processor capable of operating in plural different modes and controlling a visible display carried on the portable computer, said method comprising:

generating a mode control signal corresponding to physical movement of the computer; and

selectively changing the operating mode of said processor in response to said mode control signal.

B2
cmt
64. A method as in claim 63 wherein said plural display modes include an alphanumeric character display mode and a graphical data display mode.

65. A method as in claim 63 wherein data displayed on the handheld computer is transmitted externally to another data processing device.

66. A method as in claim 63 wherein said mode control signal is used to modify the visual display output.

67. A method as in claim 66 wherein said mode control signal is used to effect scrolling of displayed information.

WILLIAMS

Serial No. 09/171,921

68. A method as in claim 67 wherein lateral tilting movement of the computer causes lateral scrolling of displayed information.

69. A method as in claim 67 wherein rolling movement of the computer causes vertical scrolling of displayed information.

70. A method as in claim 66 wherein said mode control signal is generated to determine a likely orientation of the visual display with respect to a user and to then selectively control the orientation of display information accordingly for convenient viewing by the user.

71. A method as in claim 70 further comprising selective control of functions assigned to software-controlled function keys adjacent said display so as to match the selective orientation of displayed information.

72. A method as in claim 70 wherein a touch sensitive strip is made responsive to a user's finger touches in a directional sense corresponding to the selected orientation of displayed information.

73. A method as in claim 66 further comprising changing the density of displayed information in response to the detected proximity of a user's view point.

74. A method as in claim 63 further comprising:

WILLIAMS

Serial No. 09/171,921

locking the data processor in a secure mode until a predetermined mode control signal is generated by detected physical movement of the computer corresponding to predetermined security data.

75. A method as in claim 63 further comprising:

receiving wireless paging signals and responding thereto with a humanly-detectable paging alert to the user.

76. A method as in claim 75 including responding to said received wireless paging signals by displaying received message information.--
